

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

PCT

Translation

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing  
(day/month/year)

Applicant's or agent's file reference

08021PC

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/CH2004/000217

International filing date (day/month/year)

07.04.2004

Priority date (day/month/year)

14.04.2003

International Patent Classification (IPC) or both national classification and IPC

Applicant

ZEOCHEM AG

## 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statements under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statements
- ☒ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects to the international application
- ☒ Box No. VIII Certain observations on the international application

## 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

## 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

Authorized officer

Responsible No.

Telephone No.

Form PCT/ISA/237 (cover sheet) (January 2004)

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/CH2004/000217

Box No. 1

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This opinion has been established on the basis of a translation from the original language into the following language: \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
- a. type of material
- ☐ a sequence listing
- ☐ table(s) related to the sequence listing
- b. format of material
- ☐ in written format
- ☐ in computer readable form
- c. time of filing/furnishing
- ☐ contained in the international application as filed.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Form PCT/ISA/237 (Box No. I) (January 2004)

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/CH2004/000217

Box No. II

Priority

1. ☒ The following documents has not yet been furnished:
- ☒ copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)).
  - ☐ translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).
- Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

Form PCT/ISA/237 (Box No. II) (January 2004)

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/CH2004/000217

Box No. V

Reasoned statement under Rule 43bis(1)(a)(i) with regard to novelty, inventive step or industrial applicability:  
citations and explanations supporting such statement

## 1. Statement

Novelty (N)

Claims

8-11

YES

Claims

1-7, 12-20

NO

Inventive step (IS)

Claims

YES

Claims

1-20

NO

Industrial applicability (IA)

Claims

1-20

YES

Claims

NO

## 2. Citations and explanations:

1. This report makes reference to the following documents (D) cited in the search report. The numbering will also be maintained in the further procedure:

D1: DE-B-1 055 515

D2: US-A1-2001/0049998

D3: US-A-5 856 264

D4: EP-A-0 940 174

## 2. Clarity

- 2.1 The applicable claims 1-13 are directed toward a method for manufacturing formed zeolites which is defined by means of the following unconventional parameter:

- the bulk density of the highly dispersed attapulgite binder, measured in conformity with EN ISO 787:1995D, is larger than 550 g/L.

The use of this parameter in the given relationship must appear as a lack of clarity within the meaning of PCT Article 6. It is

Form PCT/ISA/237 (Box No. V) (January 2004)

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/CH2004/000217

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability,  
conditions and explanations supporting such statement

impossible to compare the parameter mentioned by the applicant to that which is disclosed in the prior art (see Guidelines C-III, 4.7a).

- 3 The present application does not satisfy the requirements of PCT Article 33(1) to (3) because the subject matter of claims 1-20 is either not novel within the meaning of PCT Article 33(2) nor involves an inventive step in within the meaning of PCT Article 33(3).

- 3.1 Document D1 discloses a method for manufacturing bonded zeolite molecular sieves (sodium zeolite X) wherein 3-95 parts attapulgite can be mixed with 97-5 parts molecular sieve without the adsorptive capacity of the molecular sieve being significantly reduced except by dilution. In manufacturing balls from molecular sieves bonded with clay, the clay, molecular sieve and water are thoroughly mixed in an arbitrary manner. Sufficient water is used to achieve a semiplastic state. In the following examples, the balls are dried in the air and fired after manufacture. The examples use attapulgite possessing a mean particle size of 0.077  $\mu$  (see column 1, line 4 - column 3, line 47; Tables II and III). The bonded molecular sieve is used to adsorb CO<sub>2</sub>. The use of a mixture of attapulgite with another clay binder and the use of expanding agents are made accessible in D1 (see example column 2: 1.27 kg attapulgite and 0.21 kg kaoline, stearic acid).

Form PCT/ISA/237 (Box No. V) (January 2004)